

ABSTRACT OF THE DISCLOSURE

A light source is turned off (S101), incidence of light on a line sensor is shut off, and the output value of an electric signal output from each of pixels of the line sensor (S102).

5 Since the output value is detected 128 times (S103), random noise can be reduced equal to or less than the variation in the output values for each pixel of the line sensor. The output values detected by a detection section are added up by an average value difference calculation section (S104). The sum total
10 of the output values is divided by the number of detection times (S105) to calculate the average value of the output values (S106). The average value difference calculation section calculates the difference between a setup value and the average value as an average value difference (S107) and the average value
15 difference is stored in black reference memory for each pixel (S108). The average value difference is stored in the black reference memory, so that the storage capacity can be decreased as compared with the case where black reference data itself is stored.